Serial No. 10/729,414
Wakefield, et al.
Filed December 5, 2003

Response to Office Action
Examiner: Mark A. Radke
Group Art Unit: 2165

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

INVENTORS: **Todd D. Wakefield and David L. Bean**

TITLE: **Integration of Structured Data...**

FILING DATE: **December 5, 2003**

SERIAL NO.:   **10/729,414**

DOCKET: **5142 P**

EXAMINER NAME: Mark A. Radke

GROUP ART UNIT: 2165

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Amendment and Claims Listing

Please amend the claims as follows:

Claim 1 (currently amended) 1. A computer program product located to one or more storage media devices usable to perform integration of mixed format data, said computer program product comprising instructions executable by a computer to perform the functions of:

accessing a database of structured and unstructured customer data, ~~the structured data comprising a set of data tuples;~~

~~accessing a source of unstructured data, the unstructured data including free text relatable to the data tuples of the structured data;~~

reading an access reference, the access reference having unstructured data including free text;

identifying text records within the free text;

linguistically parsing the identified text records;

identifying thematic roles and relationships within the parsed text records;

<u>applying caseframes to the linguistic parse and thematic identifications producing attribute extractions, each of said attribute extractions containing attribute information of the derived source text;</u>

interpreting the free text to produce a set of construed data reflecting at least one relational fact conveyed in the free text, each construed datum relatable to a data tuple of the structured data;

Integrating <u>the extractions with</u> the produced data with the data tuples of the structured data, said integrating producing integrated data; and

data mining the integrated data.

Claim 2 (original)   2. A computer program product according to claim 1, wherein said accessing a source of unstructured data accesses unstructured data contained within the database of structured data.

Claim 3 (original)   3. A computer program product according to claim 1, wherein said accessing a source of unstructured data and said accessing a database of structured data access two separate data sources.

Claim 4 (original)   4. A computer program product according to claim 1, wherein said instructions are further executable to perform the function of applying caseframes while performing said interpreting the free text.

Claim 5 (original)   5. A computer program product according to claim 1, wherein said instructions are further executable to perform the function of producing a new database containing the integrated data produced by said integrating.

Claim 6 (currently amended) 6. A computer program product according to claim 1, wherein said instructions are further executable to perform the function of inserting the produced data into

the database of structured data while performing said integrating of the produced data.

Claim 7 (original)   7. A computer program product according to claim 1, wherein said instructions are further executable to perform the function of creating a new database while performing said integrating the produced data.

Claim 8 (original)   8. A computer program product according to claim 7, wherein the instructions are further executable to produce a new relational database containing the integrated data produced by said integrating.

Claim 9 (original)   9. A computer program product according to claim 7, wherein the instructions are further executable to produce a file containing the integrated data produced by said integrating.

Claim 10 (original)   10. A computer program product according to claim 9, wherein the instructions are further executable to produce a file having a format selected from the group of XML, character separated values, spreadsheet formats and file-based database structures.

Claim 11 (original)   11. A computer system including a computer program product according to claim 1, further comprising: a processing unit coupled to said one or more storage media devices, said processing unit being capable of executing said instructions; and an execution command unit, whereby operation of said instructions and said processing unit may be commanded or controlled.

Claim 12 (original)   12. A computer program product according to claim 1, wherein said instructions are further executable to produce an integrated database while performing said integrating the produced data.

Claim 13 (original)   13. A computer program product according to claim 1, wherein the

Response to Office Action
Examiner: Mark A. Radke
Group Art Unit: 2165

integrated data produced by the performance of said integrating the produced data includes reference information to the original free text for construed data.

Claim 14 (currently amended)   14. A computer program product located to one or more storage media devices usable to perform integration of mixed format data, said computer program product comprising instructions executable by a computer to perform the functions of:

accessing a database of structured and unstructured customer data, ~~the structured data comprising a set of data tuples;~~

~~accessing a source of unstructured data, the unstructured data including free text relatable to the data tuples of the structured data;~~

~~interpreting the free text to produce a set of construed data reflecting at least one relational fact conveyed in the free text, each construed datum relatable to a data tuple of the structured data;~~

reading an access reference from said database, the access reference having unstructured data including free text;

identifying text records within the free text;

linguistically parsing the identified text records;

identifying thematic roles and relationships within the parsed text records;

applying caseframes to the linguistic parse and thematic identifications producing attribute extractions, each of said attribute extractions containing attribute information of the derived source text;

integrating the extractions with ~~produced data with the data tuples of~~ the structured data, said integrating step producing integrated data;

providing the integrated data to a data mining application.

Claim 15 (original)   15. A computer program product according to claim 14, wherein said accessing a source of unstructured data accesses unstructured data contained within the database of structured data.

Response to Office Action
Examiner: Mark A. Radke
Group Art Unit: 2165

Claim 16 (original)   16. A computer program product according to claim 14, wherein said accessing a source of unstructured data and said accessing a database of structured data access two separate data sources.

Claim 17 (original)   17. A computer program product according to claim 14, wherein said instructions are further executable to perform the function of applying caseframes while performing said interpreting the free text.

Claim 18 (original)   18. A computer program product according to claim 14, wherein said instructions are further executable to perform the function of producing a new database containing the integrated data produced by said integrating.

Claim 19 (currently amended)   19. A computer program product according to claim 15, wherein said instructions are further executable to perform the function of inserting the produced data into the database of structured data while performing said integrating of the produced data.

Claim 20 (original)   20. A computer program product according to claim 14, wherein said instructions are further executable to perform the function of creating a new database while performing said integrating the produced data.

Claim 21 (original)   21. A computer program product according to claim 20, wherein the instructions are further executable to produce a new relational database containing the integrated data produced by said integrating.

Claim 22 (original)   22. A computer program product according to claim 20, wherein the instructions are further executable to produce a file containing the integrated data produced by said integrating.

Serial No. 10/729,414
Wakefield, et al.
Filed December 5, 2003

Response to Office Action
Examiner: Mark A. Radke
Group Art Unit: 2165

Claim 23 (original)   23. A computer program product according to claim 22, wherein the instructions are further executable to produce a file having a format selected from the group of XML, character separated values, spreadsheet formats and file-based database structures.

Claim 24 (original)   24. A computer system including a computer program product according to claim 14, further comprising: a processing unit coupled to said one or more storage media devices, said processing unit being capable of executing said instructions; and an execution command unit, whereby operation of said instructions and said processing unit may be commanded or controlled.

Claim 25 (original)   25. A computer program product according to claim 14, wherein said instructions are further executable to store an integrated database while performing said integrating the produced data.

Claim 26 (original)   26. A computer program product according to claim 14, wherein the integrated data produced by the performance of said integrating the produced data includes reference information to the original free text for construed data.

Claim 27 (currently amended)   27. A method for integrating mixed format data, comprising the steps of:

accessing a database of structured <u>and unstructured</u> data, the unstructured data including free text, ~~the structured data comprising a set of data tuples;~~

~~accessing a source of unstructured data, the unstructured data including free text relatable to the data tuples of the structured data;~~

~~interpreting the free text to produce a set of construed data reflecting at least one relational fact conveyed in the free text, each construed datum relatable to a data tuple of the structured data;~~

<u>linguistically parsing at least some of the free text;</u>

<u>identifying thematic roles and relationships within the parsed free text;</u>

Response to Office Action
Examiner: Mark A. Radke
Group Art Unit: 2165

applying caseframes to the linguistic parse and thematic identifications producing
attribute extractions, each of said attribute extractions containing attribute information of the
derived source text;

integrating the extractions with produced data with the data tuples of the structured data
to produce integrated data; and

data mining the integrated data.

Claim 28 (original)   28. A method according to claim 27, wherein said accessing a source of
unstructured data accesses unstructured data contained within the database of structured data.

Claim 29 (original)   29. A method according to claim 27, wherein said accessing a source of
unstructured data and said accessing a database of structured data access two separate data
sources.

Claim 30 (original)   30. A method according to claim 27, wherein said performing said
interpreting the free text applies caseframes.

Claim 31 (original)   31. A method according to claim 27, further comprising the step of
producing a new database containing the integrated data produced by said integrating.

Claim 32 (original)   32. A method according to claim 27, further comprising the step of
inserting the produced data into the database of structured data.

Claim 33 (original)   33. A method according to claim 27, further comprising the step of
creating a new database.

Claim 34 (original)   34. A method according to claim 33, wherein the new database is a
relational database.

Serial No. 10/729,414
Wakefield, et al.
Filed December 5, 2003

Response to Office Action
Examiner: Mark A. Radke
Group Art Unit: 2165

Claim 35 (original)   35. A method according to claim 33, wherein new database includes at least one file containing the integrated data produced by said integrating.

Claim 36 (original)   36. A method according to claim 35, wherein the new database has a format selected from the group of XML, character separated values, spreadsheet formats and file-based database structures.
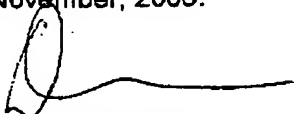
Claim 37 (original)   37. A method according to claim 27, wherein said step of integrating the produced data produces an integrated database.

Claim 38 (original)   38. A method according to claim 27, wherein the integrated data produced by the performance of said integrating the produced data includes reference information to the original free text for construed data.

Serial No. 10/729,414
Wakefield, et al.
Filed December 5, 2003

Response to Office Action
Examiner: Mark A. Radke
Group Art Unit: 2165

Respectfully submitted this 18th day of November, 2006.

Daniel P. McCarthy
Reg. No. 36,600
P.O. Box 71550
Salt Lake City, UT 84171-0550
Tel 801 661 8998
Fax 435 615 9669
Email: dmccart@xmission.com